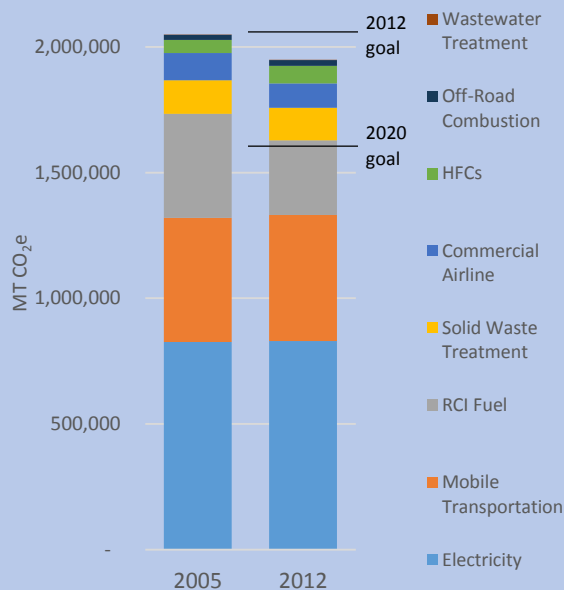


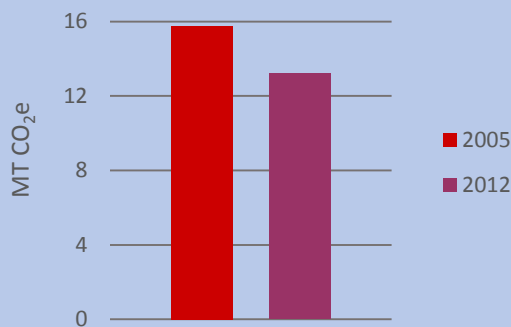
# Alexandria, Virginia

## Community-Wide GHG Inventory Summary Factsheet

### Total Emissions by Activity



### Total Emissions per Capita



### Emissions Summary

- Greenhouse gas (GHG) emissions across all sectors in the City of Alexandria decreased by 5% between 2005 and 2012; from 2,049,406 MT CO<sub>2</sub>e to 1,948,943 MT CO<sub>2</sub>e, respectively.
- Per capita emissions decreased 16% between 2005 and 2012; from 15.8 MT CO<sub>2</sub>e per capita to 13.2 MT CO<sub>2</sub>e per capita, respectively. The regional average was 14.6 MT CO<sub>2</sub>e per capita in 2005 and 13.1 MT CO<sub>2</sub>e per capita in 2012.
- In 2012, electricity use contributed 42.6% of total emissions, with commercial use accounting for about 65%.
- In 2012, mobile transportation was the second largest contributor, accounting for 25.7% of total emissions.
- Despite population growth, overall and per capita GHG emissions in the City of Alexandria decreased between inventory years in large part due to reductions in building-based fuel combustion across all sectors.
- Regional GHG emission reductions were largely due to fuel switching from coal to natural gas in electricity generation. Fuel switching also contributed to Alexandria's overall emissions reductions.

### Inventory Background

In 2008, the Metropolitan Washington Council of Governments (COG) and local governments across the metropolitan Washington D.C. area collaboratively established the regional GHG emission reduction goals of: 10% below business as usual projections by 2012 (back down to 2005 levels); 20% below 2005 levels by 2020; and 80% below 2005 levels by 2050. COG and its member jurisdictions are working toward these goals, and the region as a whole was able to meet the 2012 target, demonstrating that GHG reductions are possible even as the region's population and economy grows. This summary of Alexandria's inventory measures GHG emissions from community-wide activities, including the residential, commercial, industrial, and government sectors.

## Emissions Activities

These inventories measured GHG-emitting activities undertaken by residents, businesses, industry, and government located in Alexandria, as well as emissions from visitors. Emissions sources accounted for include:

- Electricity consumption from all sectors within the city;
- Combustion of natural gas and other fuels (referred to as residential, commercial, and industrial, or RCI fuels);
- Mobile transportation, including on-road vehicular travel, air travel undertaken by residents, business, and visitors in the city, and non-road activities such as use of construction and landscaping equipment;
- Collection and treatment of solid waste produced by residents and activities within the city boundaries
- Pumping and treatment of water and wastewater used or produced by residents and activities; and
- Hydrofluorocarbons (HFCs) released into the atmosphere, often from use as refrigerants in older HVAC models.
- All emissions are reported in metric tons of carbon dioxide equivalent (MT CO<sub>2</sub>e).

## Methodology

- The methodology for the Alexandria GHG inventory is consistent with the Metropolitan Washington Regional Greenhouse Gas Inventory. Both the regional and jurisdictional inventories use the ICLEI US Community Protocol and ClearPath tool to measure emissions.
- Utility data was collected from regional electric and natural gas utilities. Emissions factors for electricity were based on EPA's Emissions & Generation Resource Integrated Database (eGRID).
- Mobile transportation emissions were calculated using the EPA's Motor Vehicle Emission Simulator (MOVES) and based on vehicle miles traveled (VMT) data provided by COG's Transportation Planning Board. Non-road transportation emissions were calculated using the EPA's National Mobile Inventory Model (NMIM) tool. Air travel emissions were calculated using national emissions from the EPA GHG Inventory scaled to the region using population and travel data, then allocated to localities using the Washington-Baltimore Regional Air Passenger Survey.
- Emissions from landfills were calculated based on regional waste data. Wastewater treatment emissions were determined from data collected from local water utilities. HFCs emissions were calculated using national emissions scaled to the region by population.

## Links

- Greenhouse Gas Emissions Inventory for the Metropolitan Washington Region (2005-2012): INCLUDE LINK WHEN PUBLISHED
- Metropolitan Washington Climate Energy and Environment Policy Committee Webpage: [http://www.mwcog.org/committee/committee/default.asp?COMMITTEE\\_ID=250](http://www.mwcog.org/committee/committee/default.asp?COMMITTEE_ID=250)
- Eco-City Alexandria: <https://www.alexandriava.gov/Eco-City>
- Alexandria Environmental Policy Commission: <https://www.alexandriava.gov/EnvironmentalPolicyCommission>